

I Claim:

1. A burner arrangement for a heating device, comprising a combustion chamber (18) and a flame tube (22) conducting the combustion products away from the combustion chamber (18), having an inlet region (28) near the combustion chamber (18) at which combustion products enter the flame tube (22) and an outlet region (36) at which combustion products leave the flame tube (22), further comprising at least one intermediate outlet region (42) between the inlet region (28) and the outlet region (36), into which intermediate outlet region (42) a portion of the combustion products emerge from the flame tube (22).
2. The burner arrangement according to Claim 1, wherein the flame tube (22) has at least one intermediate outlet aperture (44) in at least one intermediate outlet region (42).
3. The burner arrangement according to claim 1, wherein the flame tube (22) has at least two flame tube sections (24, 26); and wherein the at least one intermediate outlet aperture (44) is provided in a transition region (38) between an upstream flame tube section (24) – relative to the flow direction (R) of the combustion products in the flame tube (22) – and a downstream flame tube section (26).
4. The burner arrangement according to claim 3, wherein an aperture (40) in the transition region (38) between the flame tube sections (24, 26) forms a portion of an intermediate outlet aperture (44).
5. The burner arrangement according to claim 3, wherein the upstream flame tube section (24) has a greater cross sectional dimension than the downstream flame tube section (26).
6. The burner arrangement according to claim 5, wherein the downstream flame tube section (26) engages in the upstream flame tube section (24), and at least a portion of an

intermediate outlet aperture (44) is provided in the overlap region of the upstream flame tube section (24) with the downstream flame tube section (26).

7. The burner arrangement according to claim 3, wherein the downstream flame tube section (26) is supported by at least one support region (46) on the upstream flame tube section (24).
8. The burner arrangement according to claim 2, wherein the upstream flame tube section (24) and the downstream flame tube section (26) are of substantially cylindrical form.
9. The burner arrangement according to claim 2, wherein the at least one intermediate outlet aperture (44) is formed in an outer wall of the flame tube (22).
10. A heating device, comprising a burner arrangement (12) according to claim 1, and a heat exchanger arrangement (14) with a heat exchanger housing (48) into which a flame tube (22) projects.
11. The heating device according to claim 10, wherein a support structure (60) for supporting at least one flame tube section (26) is provided on a side of the heat exchanger housing (48) facing the flame tube (22).
12. The heating device according to claim 11, wherein plural ribs (56) extending in the longitudinal direction of the flame tube are provided on the heat exchanger housing (48); and wherein the support structure (60) comprises at least a portion of the plural ribs (56).
13. The heating device according to claim 12, wherein the at least one flame tube section (26) is supported by clamping action between the plural ribs (56) distributed over its periphery.
14. The heating device according to claim 12, wherein the at least one flame tube section (26) is retained on at least one of the plural ribs (56) by riveting, screwing, or a like retainer.